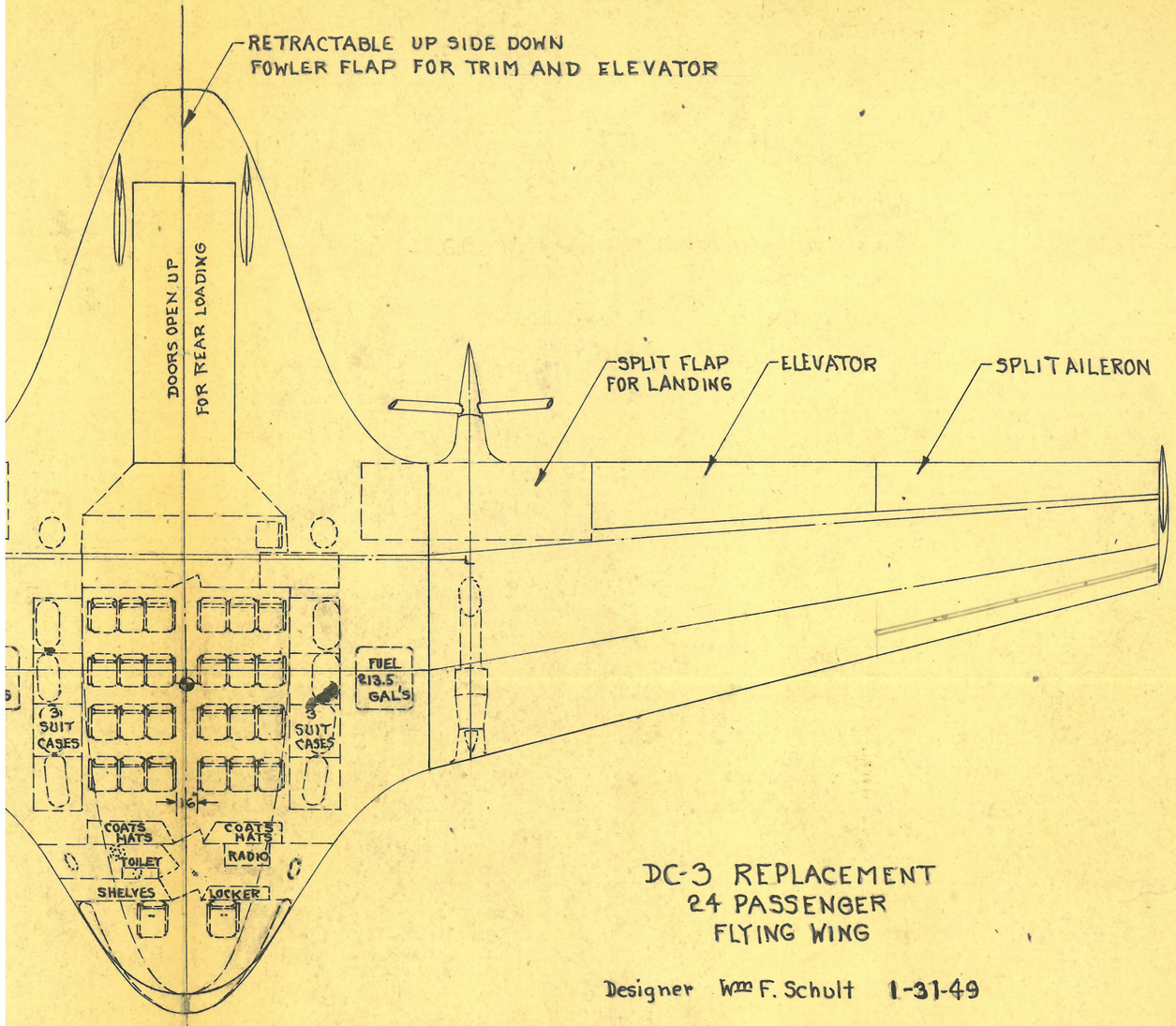


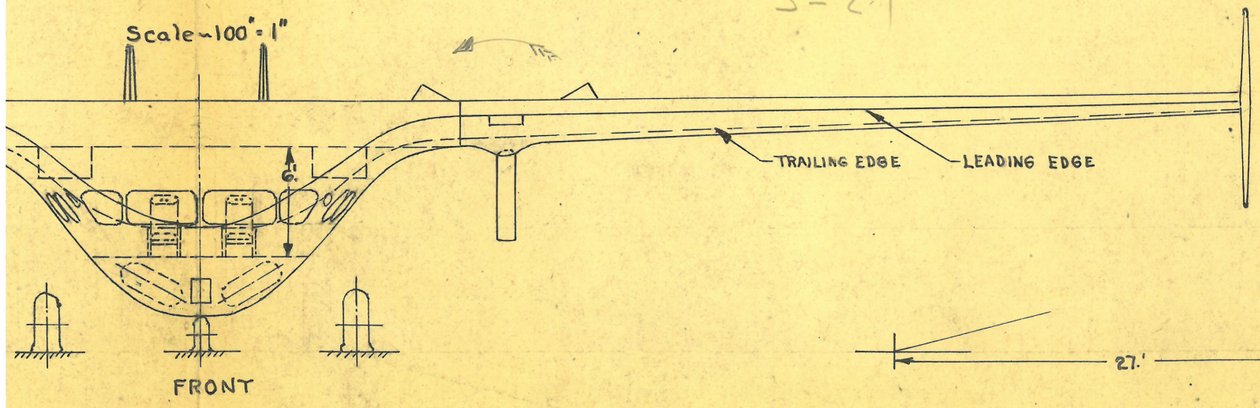
PLAN

Scale ~ 100" = 1"

DC-3 REPLACEMENT
24 PASSENGER
FLYING WING

Designer Wm F. Schult 1-31-49

S-27



FRONT

~ DIMENSIONS ~

LENGTH (Section Special 221.5)(Schult)	L =	56.16'
SPAN	b =	114.00'
CHORD (Basic C_l = 21.52' Spec. 112 (Schult))(C_t = 7.18' Spec. 312 (Schult)) M.A.C.	=	15.55'
ASPECT RATIO	R =	8.00
TAPER RATIO	λ =	2.996
HEIGHT	h =	19.00'
WING (Dihedral Trailing Edge 2°, Wash Out Tips 2°) Area	=	1,636.00 □'
FINS (Tip = 2×40 □' = 80. □')(Center = 2×30 □' = 60. □') Total Area	=	140.00 □'

~ WEIGHT ~

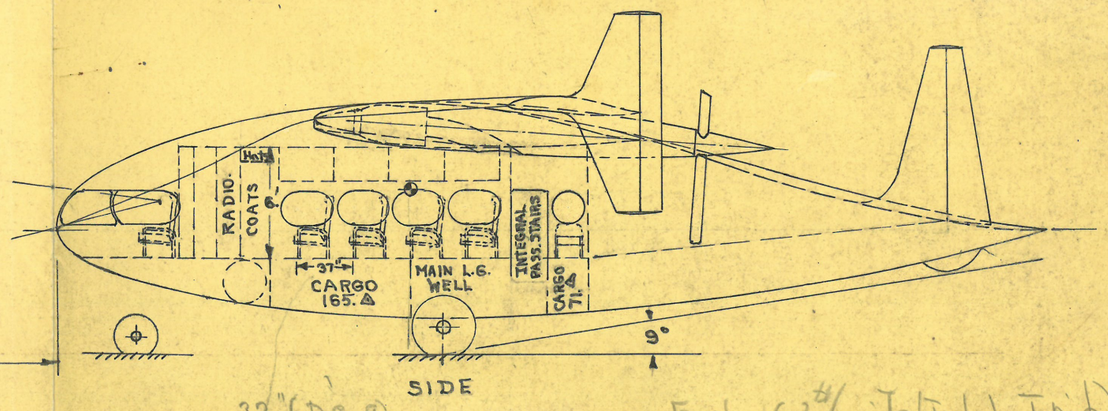
EMPTY	16,916.
STRUCTURE	9,427.
LANDING GEAR	1,950.
PROPULSION SYSTEM (2 Lycoming T53-L-7 T.P. Engines)	1,728.
EQUIPMENT	3,811.
USEFULL LOAD	9,084.
FUEL 427 Gallons	2,989.
OIL 2 Gallons	15.
CREW (2 Pilots = 340.#)(Stewardess = 140.#)	480.
PASSENGERS (24. × 170.#)	4,080.
BAGGAGE (24. × 30.#)	720.
CARGO	800.

GROSS WEIGHT 26,000.#

~ PERFORMANCE ~

Military Power Take Off's Only (1000×2=2000. B.H.P.) Normal Power Otherwise (900×2=1800. B.H.P.)

ALTITUDE	V m.p.h. MIN.	V m.p.h. MAX.	H.P. 2 ENG's	CLIMB V m.p.h.	CLIMB 1/min.	CLIMB H.P. 2 ENGS	CLIMB ΔT min.	CLIMB TOTAL min.	RANGE (4-100 MILE LEGS @ 200 m.p.h.)(TERMINAL to TERMINAL) H.P. 2 ENG's	TIME HRS	FUEL* USED	FUEL* RESERVE	MISCELLANEOUS
S.L.	71.	203.	1605.	115	1035.	1606.	10.35	Over 50' Fence	1536.	3.69	2920.	69.	T.O. Over 50' = 1733', Loiter 10 min.
5,000.		199.	1342.	115.	793.	1341.	5.63	15.98	1349.	3.85	2684.	305.	Ldg = 798', Taxi 5 min.
10,000.		204.	1260.	121.	660.	1203.	7.04	23.02	1195.	4.04	2566	423.	C_{mo} = +.042, l_p = 18.3 (W.T. Test)
15,000.		183.	894.	115.	416.	985.	9.48	32.50	1068.	4.31	2522	467.	C.G. Empty = 20.15% m.a.c., G.Wt = 18.56% m.a.c.
20,000.		183.	830.	130.	232.	823.	21.87	54.37	970.	4.86	2908.	89.	Max. Shift 16.40% to 21.28%



SIDE

32" (DC-9
21"/seat

Fuel 63#/mile (Total Trip)